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India's sustainable warehousing landscape: A greenprint



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Preface

As we stand at the crossroads of economic growth and environmental responsibility, India's warehousing sector is undergoing a profound transformation. The transition from conventional industrial spaces to sustainable logistics infrastructure represents not just a change in building specifications, but a fundamental shift in how we conceptualise the future of logistics in one of the world's fastest-growing economies.

This whitepaper arrives at a pivotal moment when global supply chains are being reconfigured, regulatory frameworks are evolving, and corporate sustainability commitments are moving from aspiration to action. **For India, which is projected to double its warehousing stock by 2030,** the decisions we make today about how this infrastructure is developed will reverberate for decades to come.

What makes this analysis particularly valuable is its **multi-stakeholder perspective**. By examining the green warehouse revolution through the **distinct lenses of developers, investors, and occupiers**, we gain a comprehensive understanding of the market forces,

financial mechanisms, and operational considerations that are collectively driving this transition.

The data presented here tells a compelling story: **institutional Grade A stock has tripled since 2019, with over 78% of this space being green certified or in various stages of certification process. The projection of 270 mn sq ft of green warehouse stock by 2030** signals not just growth, but a fundamental realignment of the market toward sustainability.

This is not merely about building better warehouses—it's about **creating resilient supply chains, unlocking new financing pathways, and meeting the evolving demands of global logistics**. For industry participants navigating this landscape, this whitepaper offers both strategic insights and practical guidance on how to capitalise on the opportunities presented by sustainable warehousing.

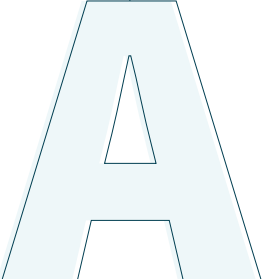
As we look to the future, it's clear that **environmental consciousness in logistics is not just a trend but a competitive necessity**.



Introduction

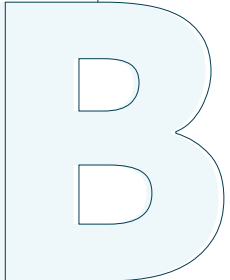
The warehousing sector is witnessing a transformative shift towards sustainability, driven by a confluence of global economic factors, environmental regulations, and corporate commitments. The global manufacturing and logistics landscape is experiencing unprecedented volatility, primarily due to three major levers:

Market volatility and supply chain restructuring

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- i. **Trade tensions and tariff wars:** The ongoing trade disputes between major economies have disrupted established supply chains, forcing companies to reevaluate their manufacturing and distribution strategies.
 - ii. **Geopolitical sanctions:** Economic sanctions have led to the realignment of trade partnerships, impacting the flow of goods and materials across borders.
 - iii. **Supply chain resilience:** The COVID-19 pandemic exposed vulnerabilities in global supply chains, prompting a shift towards nearshoring and reshoring of manufacturing activities.

These factors have collectively necessitated a rejig in supply chain configurations, directly impacting warehousing requirements and locations. Sustainability has emerged as a key consideration in this restructuring process, as companies seek to build more resilient and environmentally responsible supply chains.

EU Carbon Border Adjustment Mechanism (CBAM)



The European Union's proposed Carbon Border Adjustment Mechanism (CBAM) represents a significant regulatory driver for sustainability in warehousing:

- i. **Tariffs on carbon-intensive imports:** The CBAM aims to level the playing field between EU producers subject to stringent environmental regulations and foreign competitors operating under less rigorous standards.
- ii. **Impact on global trade:** This mechanism is expected to affect industries, potentially reshaping global trade flows and manufacturing locations.
- iii. **Warehousing implications:** To mitigate the impact of these tariffs, companies are likely to prioritise low-carbon warehousing solutions, driving demand for sustainable industrial real estate.

Corporate net-zero commitments

The proliferation of net-zero targets among corporations is a significant driver of sustainability in warehousing:

- i. **Scope 3 emissions:** As companies strive to reduce their indirect emissions, warehousing and logistics operations have come under increased scrutiny.
- i. **Green building certifications:** Occupiers are increasingly demanding LEED, BREEAM, or other green-certified warehouses to align with their sustainability goals.
- i. **Renewable energy adoption:** On-site solar installations and power purchase agreements for renewable energy are becoming common features in sustainable warehousing projects.

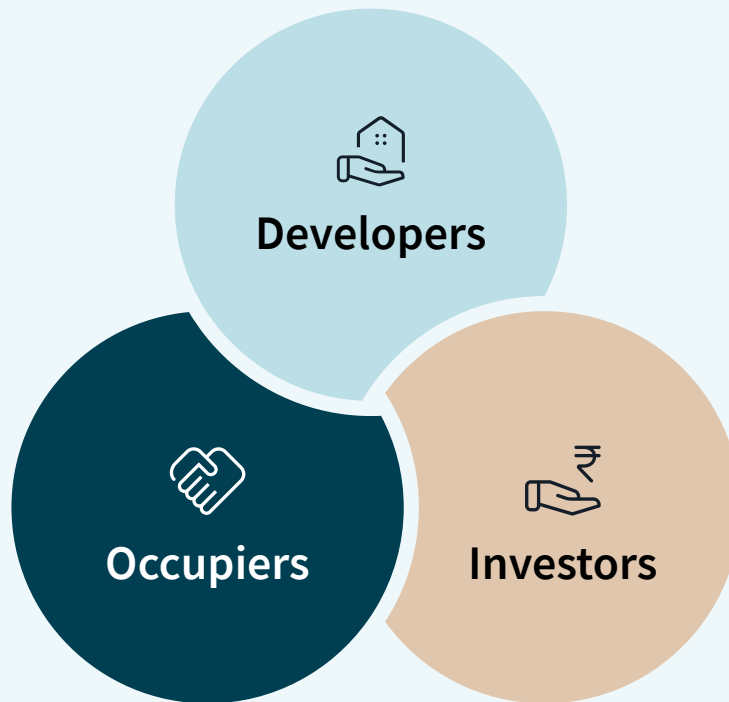
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Sustainable warehousing is no longer a choice — it's a responsibility.

Rajesh Jaggi - Everstone Group

Purpose of this whitepaper

Within the above context of the various factors and drivers, this whitepaper explores the multifaceted reasons behind the increasing emphasis on sustainability in warehousing, examining the implications for the **three key stakeholders** in the industrial and logistics real estate space, i.e.:



The scope of this whitepaper is to present the various perspectives of these key stakeholders and how they are shaping the landscape for warehousing towards a sustainable and lower-impact real estate.

1. Developer's objective: Comprehensively define the **sustainable warehouse landscape** in India, with a specific focus on targeting the institutional developer portfolio and conducting an in-depth analysis of the **green warehousing footprint across the country**. Our aim is to provide a clear and detailed overview of the current state and future potential of sustainable warehousing in the Indian market, and what developers are providing as part of green warehouse development.

2. Investor's objective: Explore the concept of **sustainable finance**, available resources or channels to access these, and investor considerations in green warehousing investments.

3. Occupier's objective: Explore the **concept of green leasing**: The intent is to explore the concept of green leasing in the Indian context. It provides an in-depth analysis of the **key elements and strategies for green leasing** and what drives the occupiers to execute such leases.

Chapter 1: Developer's perspective

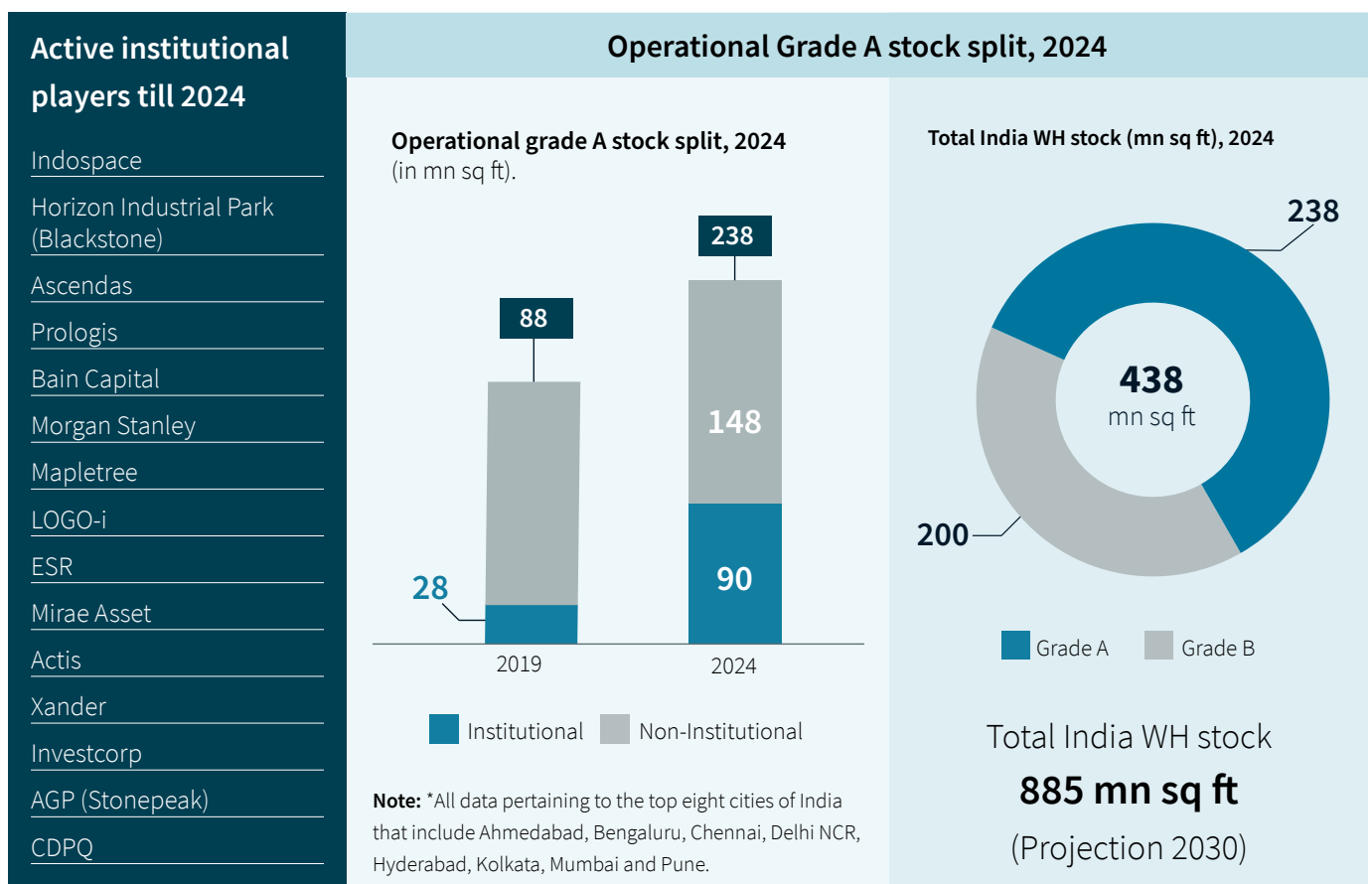
The Indian green warehousing landscape

The Indian warehousing market has witnessed rapid strides in not only the sheer growth of stock volume but also in the evolution of technology, specifications, and the transition of grade and investment types in warehouse space.

The Indian green warehousing footprint

- India's Grade A warehousing stock has grown **2.5X~ from 88 mn sq ft in 2019 to 238 mn sq ft in 2024**, and during this time period, the institutional Grade A warehousing space has **increased 3x from 28 mn sq ft in 2019 to 90 mn sq ft in 2024**.

India investment opportunity



Source: JLL

Note: This is not an exhaustive list but represents almost all the major institutional players with operational projects as of 2024. The list of institutional players mentioned above includes some of the large active players in the market.

- This massive growth presents two large opportunity areas in green leasing and financing:
 - As the market continues to transition from Grade B to Grade A space, we are witnessing a significant non-institutional stock that has the potential to be retrofitted to be compliant green rated facilities thereby presenting an opportunity of increasing compliant stock and improving in the value of the warehouse product in the market at a faster pace and making them market product fit.
- Grade B projects will face stiff competition to adopt sustainable retrofitting in existing stock, while new stock may adopt some cost-effective solutions as part of their product offerings.
- Additionally, the warehousing stock is expected to double, and a significant share of this will be Grade A stock, with higher engagement of institutional investors contributing to the increase in the green footprint of warehouse space.

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Sustainability remains a cornerstone of ESR India's growth narrative. The industrial real estate sector, often scrutinised for its environmental impact, is witnessing a green revolution led by organisations like ESR.

Abhijit Malkani - ESR India



Understanding institutional Grade A in India

The Grade A warehouse space have seen the influx of several institutional players in the market as investors in both project and/or platform level that has further helped in the capital infusion of the development of Grade A spaces that are not only high on technical specifications but are compliant to several green practices and projects are actively pursued for green certifications and ratings.

Specifications	Institutional Grade A
Clear height	12m +
Flooring	FM Global II Compliance laser creed floors
Floor load	Above 6 tonnes/sqm
Type of structure	Pre-engineered structure from reputed/leading PEB vendors
Docking area	Dock levellers, automated panelled or shutter doors, 20 to 30 meters set back as a docking apron, etc.
Plinth height	1.2 m above ground level
Canopy length	4.5 m and above
Column bay span	16.8 – 27 m X 8 - 10 m
Fire safety	NBCC standard sprinklers/Fire hydrants with required DG & Water storage system
Sky lighting	~5% of the roof area
Air circulation	5 to 6 air changes with Louver systems
Infrastructure	STP, insulation, D.G., storm water & drainage systems, concretised roads
Ground coverage	Max 50% ground coverage with sufficient all-around setbacks and parking facilities
Warehouse walls	3.5 m precast concrete walls/Waffle creed RCC panels
Compound walls	8 to 10 feet of concrete walls with an additional 2 to 3 feet of Y angles and circular barbed wires
Wall panels	0.50 mm TCT single skin, SMP coated, Galvalume (AZ150 GSM) profiled sheets
Insulation	Roof and side cladding as required with the latest insulation material
Roof type	Standing seam sandwich panel with Louvers ventilation system
Docking provision	1 per 1,000 sqm/loading and unloading area of 30m for one side docking and 45m for back-to-back loading
% of Total SF that is office space	~5% (Mezzanine floor provided)
Approvals/Compliance	Zone, usage, plan sanctions, environment clearance, occupation certificate, fire NOC, all required approvals in place
Layout plan	All warehouses are planned with 50% ground coverage with sufficient setbacks all around the warehouse for ease of vehicle circulation/movements, with dedicated common amenities, truck parking areas, common security, and amenities
Common amenities	Driver and staff restroom, cafeteria

Note: The specifications may vary based on asset, city tenant requirements, etc.

From a developer's perspective, increasing focus on green warehouses and adoption of sustainable best practices in real estate development has several key reasons:

- **Environmental regulations:** Governments are implementing stricter environmental regulations and building codes. Developing green warehouses helps developers comply with these regulations and avoid potential fines or penalties.
- **Tenant demand:** Many companies, especially large multinational corporations, are prioritising sustainability in their supply chain operations. Green warehouses are more attractive to these environmentally conscious tenants, potentially leading to higher occupancy rates and rental premiums. An increased focus on flexible and adaptable warehouse designs to accommodate changing occupier needs makes the market product relevant.
- **Cost savings:** While initial construction costs may be higher, green warehouses often result in long-term cost savings through reduced energy consumption, lower maintenance costs, and improved operational efficiency.
- **Energy efficiency:** Sustainable warehouses incorporate energy-efficient technologies like LED lighting, solar panels, and advanced HVAC systems, reducing overall energy consumption and operational costs.
- **Government incentives:** Many states offer tax breaks, grants, or other incentives for developing sustainable buildings, making green warehouses financially attractive to developers.
- **Certifications and recognition:** Sustainable warehouses can achieve certifications like LEED, IGBC, etc., which can lead to improved stakeholder relations and potential competitive advantages and can enhance their marketability and value.

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By obtaining green certification for warehouse and industrial parks and facilities, developers can further underline their commitment to sustainability. We achieved IGBC Platinum certification for five parks last year and are confident of getting all our operational parks IGBC certified this year.

Taruna Mahajan - Blackstone

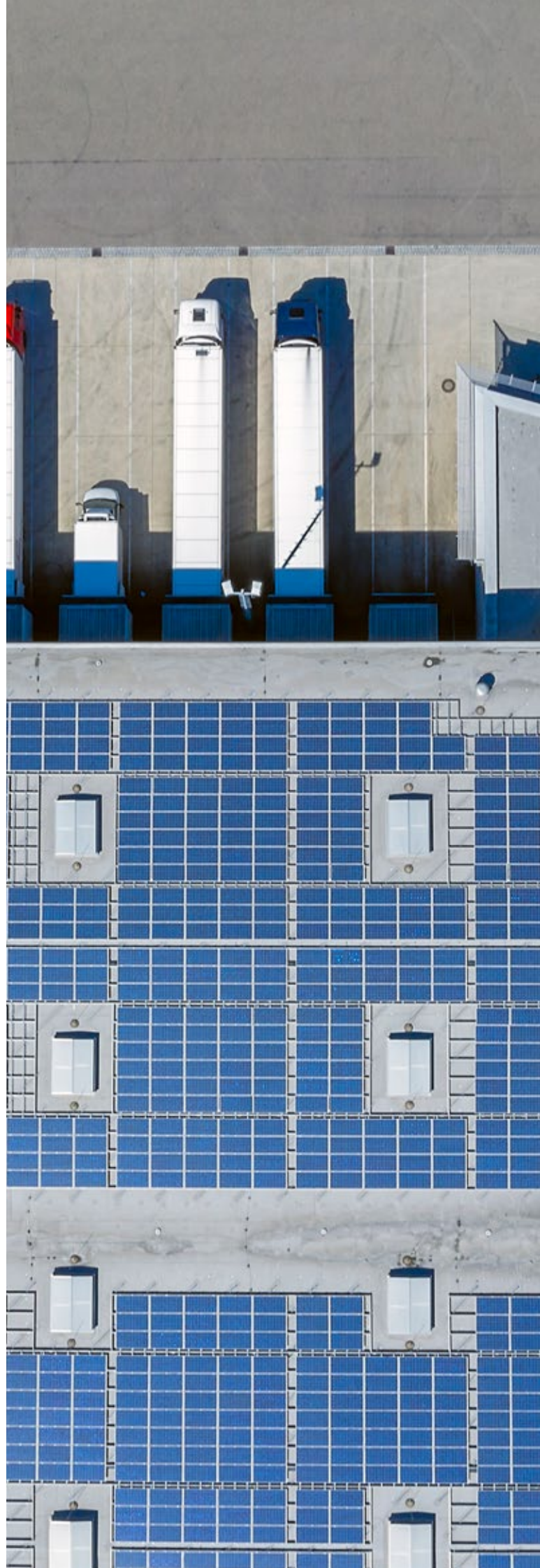


- **Access to green financing:** Many investors/ financial institutions offer favourable terms for green building projects, making it easier for developers to secure funding for sustainable warehouse developments.
- **Future-proofing assets:** As sustainability becomes increasingly important, green warehouses are likely to maintain their value better over time compared to traditional warehouses, often making them more REIT-able products.
- **Reduced carbon footprint:** Green warehouses help reduce the overall carbon footprint of logistics operations, aligning with global efforts to combat climate change and helping developers to achieve their green targets.

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Sustainability is a cornerstone of NDR's vision for the future of warehousing and industrial infrastructure. As India solidifies its position as a global manufacturing and logistics hub, the industry must evolve to meet growing demands while addressing critical environmental challenges.

Daljit Singh - NDR



- **Waste reduction:** Sustainable practices in warehouse construction and operation can significantly reduce waste generation and promote recycling initiatives.
- **Climate resilience:** Developers have been actively interested in adopting sustainability practices to mitigate and optimise:
 - Temperature management (due to worsening climate change) through warehouses incorporating advanced insulation, reflective roofing materials, and natural ventilation systems that reduce dependence on mechanical cooling.
 - Water resilience - Water scarcity affects many Indian industrial zones. Forward-thinking developers are implementing rainwater harvesting systems, water recycling facilities, and drought-resistant landscaping. These measures ensure operational continuity during water shortages while reducing pressure on municipal supplies.
- Flood mitigation through elevated construction, permeable paving, and robust stormwater management systems to prevent business disruptions during increasingly unpredictable monsoon seasons.
- Green warehouses with on-site renewable energy generation (particularly solar, given India's abundant sunshine) and energy storage provide operational resilience during grid failures while reducing carbon emissions.
- Developers building to higher sustainability standards today are protecting against compliance costs tomorrow, especially as India strengthens its climate commitments for developers in India, building climate-resilient green warehouses isn't just environmental stewardship—it's becoming fundamental to ensuring long-term asset value and operational reliability in a climate-stressed future.

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Sustainable logistics parks are transforming warehousing operations and minimising environmental impact. We are in an age where sustainability isn't just an ethical choice – it is a strategic advantage.

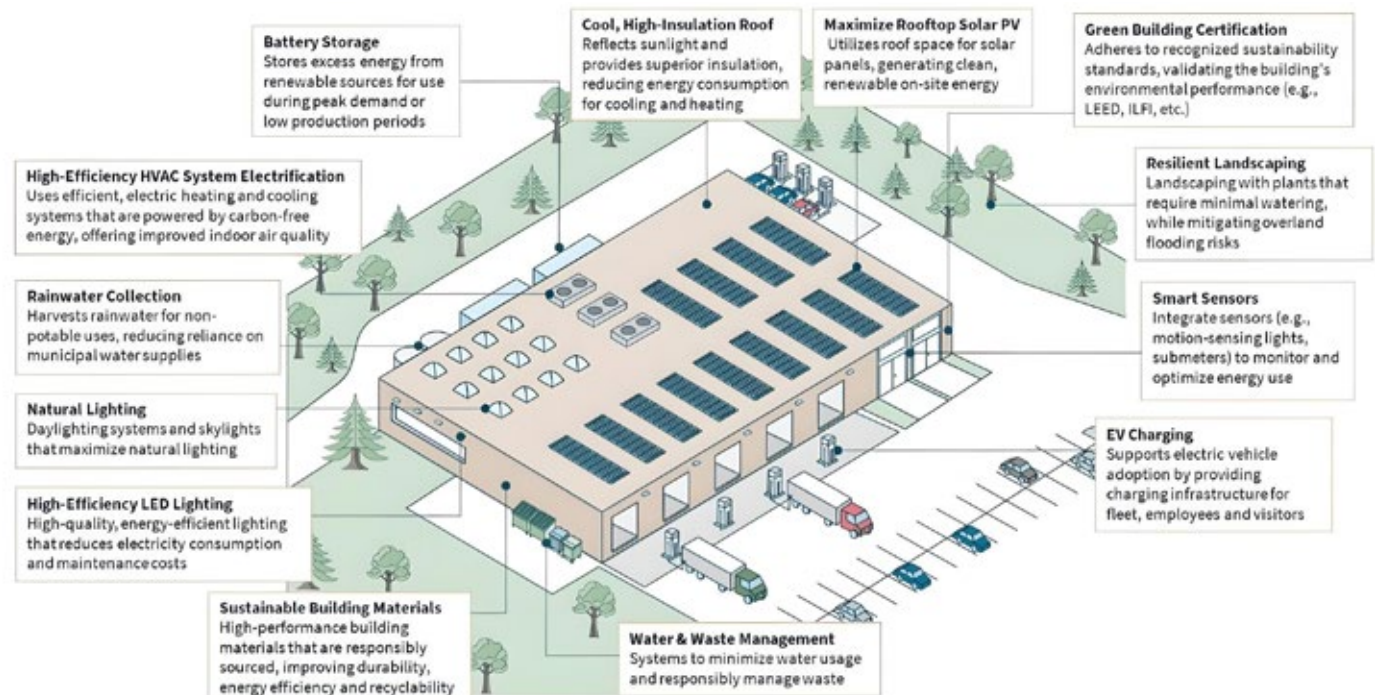
Taruna Mahajan - Blackstone

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Sustainability is integral to shaping a resilient and responsible logistics ecosystem. At NDR, we are steadfast in our mission to drive innovation, set new benchmarks, and create a greener, more sustainable future for the industry and the generations to come.

Daljit Singh - NDR

What does an energy-smart, sustainable warehouse look like?



Analysing the institutional green warehouse footprint in India

- Post-COVID, institutional investment has doubled in the warehousing space, which has resulted in higher activity in the green certification space.
- There has been increased impetus on the certification of assets, as this improves potential competitive advantages. Currently, the warehousing sector in India does not have assets under REITs, but if one traces the evolution of asset marketability, REITs in warehousing will eventually enter the Indian market and green certifications, thus making these assets future-ready and enhancing their marketability and value.

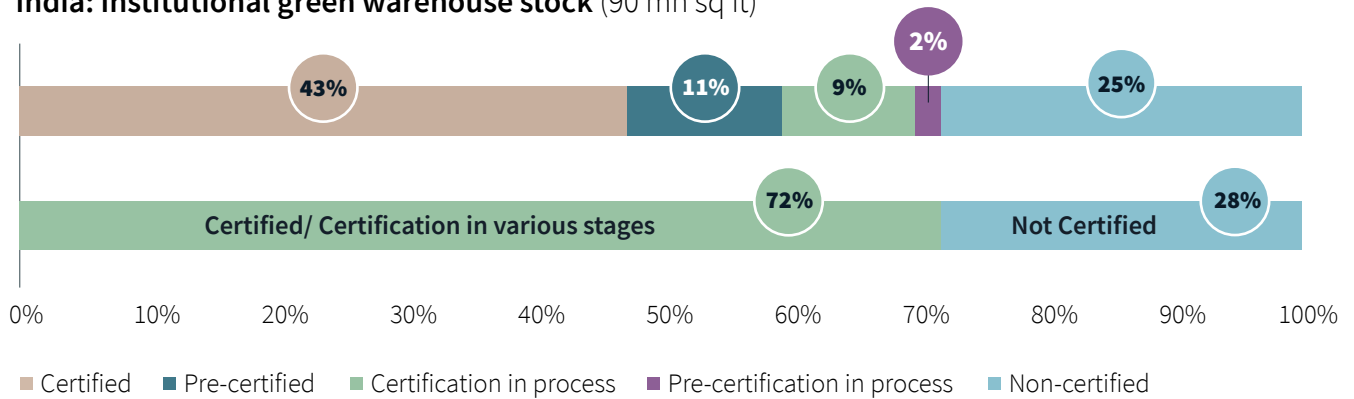
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Our parks are pre-certified by IGBC gold and platinum and built around human-centric design principles. ESR is committed to a net-zero future by 2040 and is at the forefront of this ambitious goal.

Abhijit Malkani - ESR India

- A deep dive into the current 90 mn sq ft of institutional portfolio of warehouse presents the following:
 - More than 45% of the institutional stock is already certified under LEEDs/GRIHA/ IGBC, etc., while another 12% is pre-certified.
 - Additionally, another ~12% of the warehouses are in various stages of the certification process.

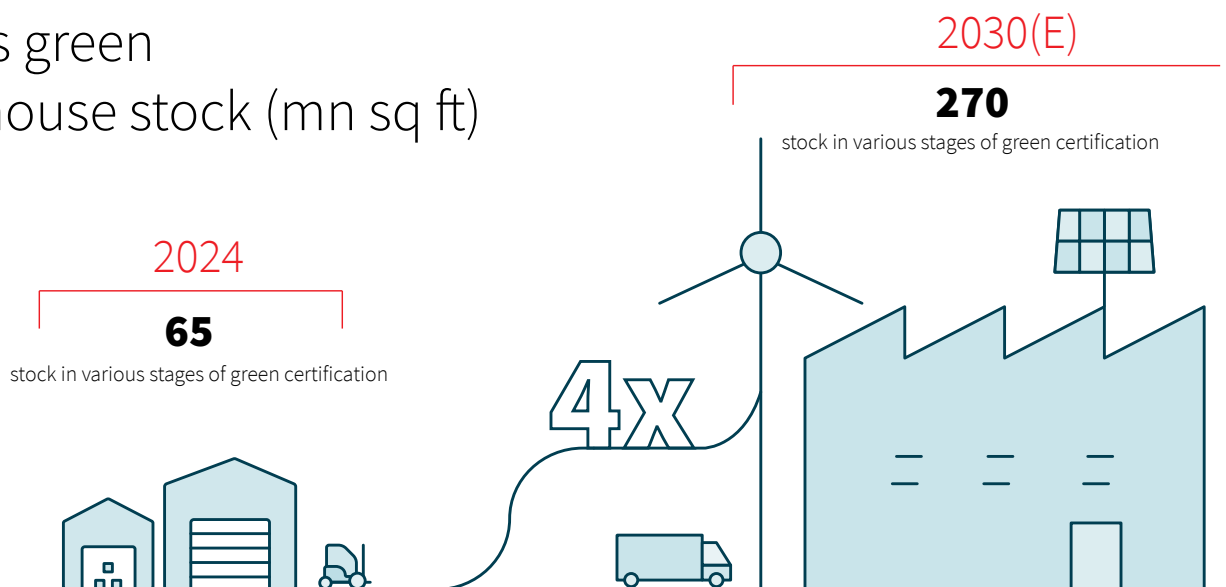
India: Institutional green warehouse stock (90 mn sq ft)



Source: JLL

- Going forward, the future of sustainable warehousing looks greener, as we project a visible supply pipeline of ~260 Mn sqft of institutional supply by 2030, which represents 70% of all Grade A forecasted supply (i.e., ~370 mn sq ft).

India's green warehouse stock (mn sq ft)



Source: JLL

- As from current statistics, institutional players are at the forefront of introducing green warehousing, we expect a ~80% compliant green warehouse supply contribution, that would build **India's green warehouse stock to ~270 mn sq ft by 2030, i.e.: a 4x growth of the current green warehouse stock.**
- There is also an added opportunity of tapping into the latent potential of retrofitting/refresh of existing non-green compliant Grade A stock (especially, non-institutional spaces), that has witnessed increased interest by institutional funds for their lateral entry in the market through acquisition of projects and thereby achieving horizontal portfolio expansion. One of the many areas where these funds' post-acquisition focus is capex infusion in making the assets market relevant and future-proof, thereby also contributing significantly to the introduction of green warehouse retrofitting. This practice is also expected to further bolster India's green warehouse stock.

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The warehouse industry, driven by unparalleled growth, is becoming increasingly conscious of rising environmental concerns and is embracing sustainability in design, construction, and operations.

Ascendas Firstspace



Chapter 2: Investor's objective

Investors are increasingly drawn to green warehouses as attractive investment opportunities. From an investor's perspective, here are key insights and pointers on why green warehouses are becoming a preferred investment decision:

- **Potential for higher rents:** Some tenants are willing to pay premium rents for green spaces, potentially increasing the income generation potential of the asset.
- **Higher asset value:** Green warehouses often command premium valuations due to their enhanced features and sustainability credentials. These properties tend to depreciate more slowly, maintaining their value over time better than traditional warehouses.
- **Increased tenant attraction and retention:** Sustainable warehouses attract high-quality, environmentally conscious tenants, often leading to longer lease terms and lower vacancy rates. This tenant preference can result in more stable and predictable cash flows for investors.
- **Risk mitigation:** Green warehouses are better positioned to meet evolving environmental regulations, reducing the risk of obsolescence or costly retrofits in the future. They often incorporate resilient design features, potentially lowering risks associated with climate change and extreme weather events.
- **Future-proofing investments:** As sustainability becomes a key factor in real estate, green warehouses are likely to remain competitive and relevant in the market for longer periods.
- **Access to green financing:** Many financial institutions offer preferential terms for green buildings, including lower interest rates and longer loan terms. This can improve the overall financial structure of the investment and potentially increase returns.
- **Enhanced sustainability profile:** Investing in green warehouses aligns with achieving sustainability criteria, which are increasingly important to institutional investors and fund managers. It can help improve the overall sustainability rating of an investment portfolio, attracting socially responsible investors.
- **Government incentives:** Many jurisdictions offer tax breaks, grants, or other incentives for green buildings, potentially enhancing the return on investment.
- **Market differentiation:** In a competitive real estate market, green warehouses stand out, potentially leading to faster leasing and higher occupancy rates.

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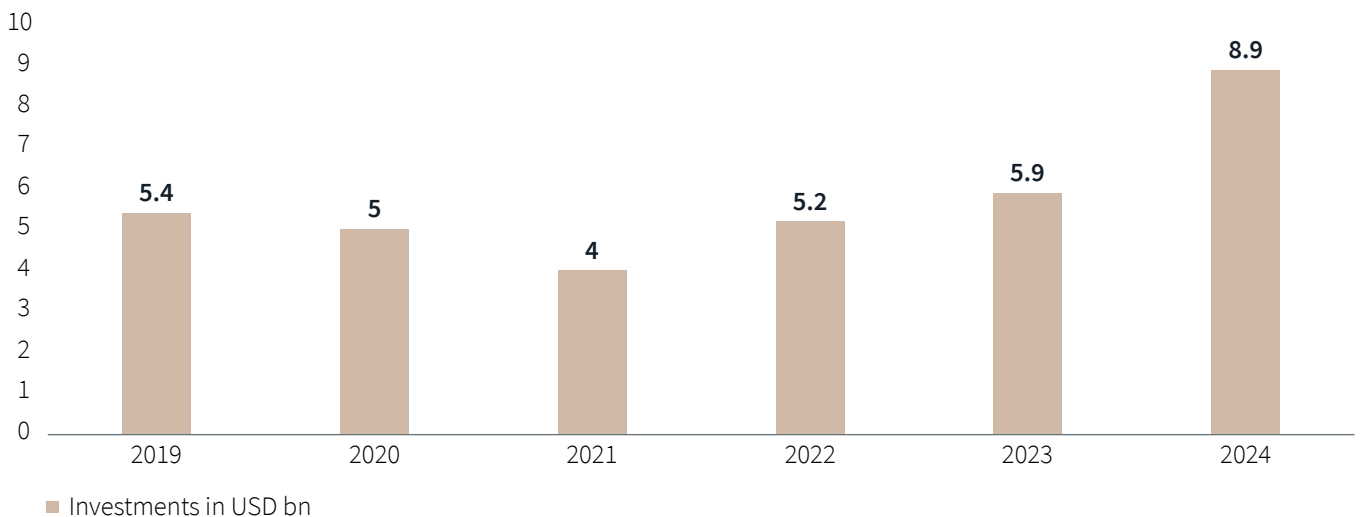
For occupiers, these initiatives reduce energy costs and provide a healthier working environment, which can help improve employee satisfaction and productivity. For developers, these efforts enhance the attractiveness of the properties and can command higher rents.

Abhijit Malkani - ESR India

Sustainability finance

Sustainable Finance involves taking a financial decision regarding investment and lending based on sustainability factors. Instead of funding any business, sustainable finance supports the planet, treats people fairly and follows strong ethical practices.

Investments in the warehousing sector (USD bn)

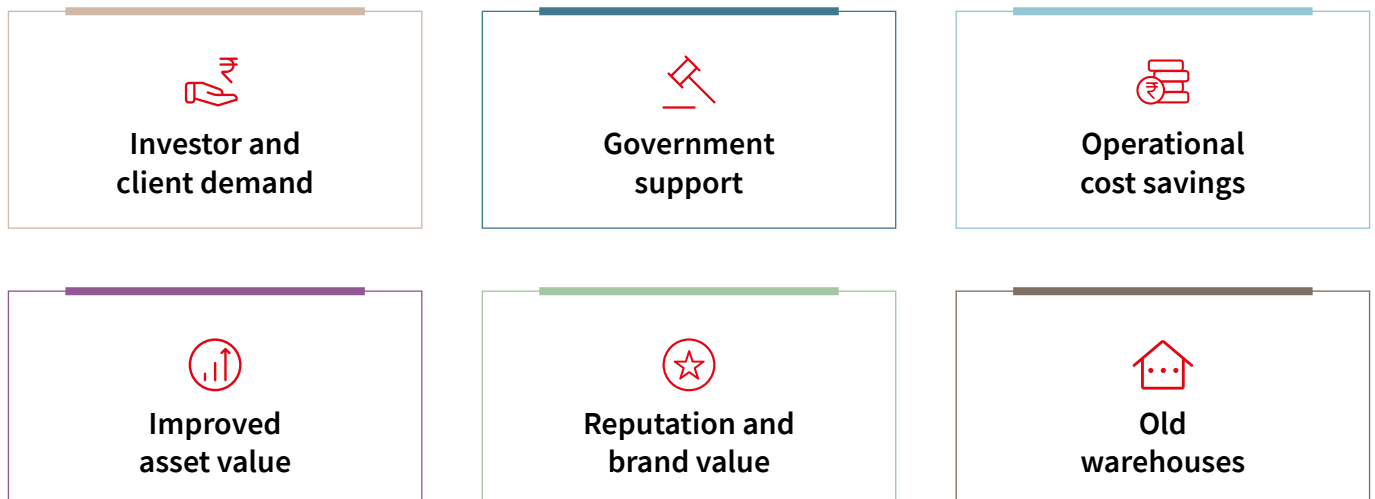


Source: JLL

Why does a developer need to go for sustainable finance?

The warehousing industry has gained importance since the COVID-19 pandemic, increasing from 2% in 2020 to 20% in 2021. Moreover, in the coming years, the warehousing industry is predicted to reach USD 34.99 mn and expand at a CAGR of 15.64% by 2027, thereby increasing the demand for warehouses. Nowadays, all investors and tenants support sustainable warehousing space, and therefore, sustainable warehouses are more in demand.

The reasons for the need for sustainable finance by the developers are:





What are the ways that can be used by developers to finance a sustainable warehouse?

Green Bonds

- These are debt instruments specifically designed to support sustainability.
- Example: a developer wants to develop a warehouse of 15000 sq. ft. and for that he needs about 100 Cr, the developer can then issue a green bond, where in the investors will have to purchase the bond and then in return, they will receive coupons either annually or semi-annually and at maturity they will receive the par value plus the coupon.

Green Loans

- These are structured as loans for raising funds for financing the green warehouses. These loans are provided by some financial institutions or even banks, the main advantage to these types of loans is that they are provided at a very low rate of interest.
- Example: a developer wants to borrow funds for the development of a warehouse; he can approach some financial institution or bank for the loan.

Sustainability Linked Bonds

- These are also debt instruments, but they are a bit different from those of the green bond, here the cost of debt is tied to the performance of sustainability KPIs.
- Example: the developer wants to develop a green warehouse of 15000 sq. ft., and for that he raises 100 Cr through SLBs, but now the investors who purchase the bond won't be getting fixed coupon payments, rather their expenses are tied to the issuers meeting his sustainability goals.

Public Private Partnership

- This is where the government or some regulatory body partner up with a private entity to develop projects that might benefit the area.
- Example: the government of India wants to develop a chain of sustainable and automated warehouses near the Mundra port, and for this the government conducts a bidding system and then partners up with the Adani group, who happened to win the bid, to develop the project, where in the government provides land and partial funding to build these warehouses.

Blended Finance

- This is the mixing of both public and private funds together in a common investment scheme or deal, where each party uses their expertise in a complementary way.
- Example: a start-up logistic company wants to build a net-zero warehouse but fails to attract investments due to the huge cost of investment. The Green Climate Fund then provides a low-rate green loan to the company and a partial risk guarantee, which helps de-risk the project. This attracts commercial banks and VCs to co-invest in the project, thereby successfully achieving financial closure.

Here are a few case studies that exhibit green financing that have been realised:

1 Case study

IndoSpace Core acquired INR 1000 crore green loan from a foreign bank

In 2020, IndoSpace Core, which owns 50+ Grade A Logistic Parks in 8 states and 11 cities of India (2024), announced the closing of a green loan facility provided by a foreign bank, which was IndoSpace Core’s Sole Green Finance Advisor, Sole Lender, and Account Bank.

Key highlights of the transaction:

Loan amount	INR 1000 cr (USD 116 mn)
Instrument	Green Loan
Borrower	IndoSpace Core (a joint venture between real estate developer and warehousing and logistics specialist IndoSpace, investor Canada Pension Plan Investment Board (CPPIB), and global investment and fund manager GLP)
Lender	Foreign Bank

Strategic goals for the investment

Proceeds from the debut green loan to be used towards the

- Financing of certified green projects
- Refinancing of certified green projects

The green buildings are said to have achieved EDGE green building certification developed by the IFC, a member of the World Bank Group.

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Prioritising energy efficiency, circular design, and community well-being is paramount. By embedding sustainability into every facet of our operations, we not only mitigate our environmental footprint but also establish resilient and future-ready supply chains that drive long-term value for our customers, investors, and the planet.

Rajesh Jaggi - Everstone Group (one of IndoSpace’s investors)

2 Case study

Anchoring green growth in India's warehousing sector through Sustainability-Linked Bonds (SLBs)

NDR InvIT, a warehousing Infrastructure Investment Trust (InvIT) with AUM at 16.99 mn sq ft (2024), issued India's first Sustainability Linked Bond, which was anchored by International Finance Corporation (IFC) - a member of the World Bank Group.

Key highlights of the transaction:

Issuance value	INR 6300 mn (USD 75 mn)
Instrument	Local currency Sustainability-Linked Bond (SLB)
Issuer	NDR InvIT, Sponsored by NDR Warehousing Pvt. Ltd
Anchor investor	International Finance Corporation (IFC) [Member of World Bank Group]
Certification target	EDGE Certification (Excellence in design for greater efficiencies) by IFC

Strategic goals for this investment :

- i. **Green infrastructure development:** Enhance the quality of warehousing infrastructure.
- ii. **Decarbonisation goals:** Reduce greenhouse gas emissions and water consumption across facility.
- iii. **Gender-inclusive design:** Integrate inclusive employment practices under IFC's India Gender Collaborative.

Significance of the SLB mechanism:

- i. Performance-based financing where interest rates are linked to sustainability performance, offering financial incentives.
- ii. Market signalling, which would create replication across India's infrastructure financing landscape
- iii. Private capital mobilisation towards India's climate goals by channelising institutional capital towards green logistics assets.
- iv. Role of IFC will be at three levels: Capital Support, Technical Assistance for EDGE Certification and sustainable practice compliance, and finally thought leadership through its sustainability integration framework.

Chapter 3: Occupier's objective

A key driver to this product transition is occupier driven who see green warehouse spaces as not only compliant space that help pace their sustainable operations target faster but have also witnessed tangible benefits that reduce in operations cost in the long run.

Some of the major decision drivers for occupiers in opting for green warehouse have been:

- Prioritisation of energy-efficient warehouses to reduce operational costs and meet sustainability targets.
- Green warehouses often incorporate water-saving features, such as rainwater harvesting and efficient plumbing systems, addressing growing concerns about water scarcity.
- Long-term cost stability: Features like on-site renewable energy generation can provide more predictable and stable energy costs over time.
- Waste reduction: Green warehouses often have better waste management systems, helping occupiers reduce their waste output and potentially save on waste disposal costs.
- Technology integration: Green warehouses often incorporate advanced technologies that can improve operational efficiency, such as smart energy management systems or IoT devices.
- Health and safety: Sustainable design features in green warehouses, such as better ventilation and use of non-toxic materials, can contribute to a healthier work environment.
- Alignment with customer expectations: Many end-consumers and B2B customers are prioritising sustainability, making it important for occupiers to demonstrate their commitment throughout their operations, including warehousing.
- Alignment with corporate goals to reduce emissions: Nearly two out of every three future requirements for industrial space come from occupiers with established targets to reduce operational emissions, primarily through energy upgrades, fleet electrification and clean energy procurement to meet their corporate sustainability goals.

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Green certified warehousing is the way forward, and sustainability ranks #1 in our site shortlisting process. We are currently also engaged in the process of building a new manufacturing unit, and we are going green.

Bijendra Sharma - BHS Corrugated



Green leases:

These leases aim to reduce the environmental impact of the warehouse operations while potentially lowering operational costs for both parties. Key features of green leases in warehousing often include:

- Energy efficiency requirements
- Water conservation measures
- Waste reduction and recycling programs
- Use of sustainable materials in construction or renovations
- Implementation of renewable energy sources
- Regular environmental performance reporting

Green leases are steadily gaining traction in the Indian warehousing market. Adoption of green lease clauses has increased significantly in the past five years, especially post-COVID.

- **Growing awareness:** With increasing environmental consciousness and government initiatives promoting sustainability, there's a growing awareness about green leases in India's warehousing sector.
- **Economic benefits:** Green warehouses can lead to significant cost savings through reduced energy consumption and operational efficiencies, which is particularly attractive in the price-sensitive Indian market.
- **Compliance with regulations:** As India strengthens its environmental regulations, green leases can help ensure compliance with current and future laws, reducing potential legal risks for both landlords and tenants.

Green lease agreements

Formalize arrangements with landlords to reduce energy usage, implement sustainability measures, and share data on emissions performance.



Why these matters

30% - 40%	Savings in total energy consumption (kWh/Month) *
20% - 30%	Savings in Potable water consumption (Litres/Person/Day) *
2.5 - 4 years	Average payback period for return on investment**
32% - 35%	Reduction in total embodied energy (MJ/sq m) **

*IGBC, non-process use; based on core activity, metrics vary

**JLL Sustainable Warehousing Research

Source: JLL

- **Attracting multinational tenants:** Many global companies have sustainability targets and prefer green-certified buildings. Offering green leases can make Indian warehouses more attractive to these potential tenants.
- **Certification standards:** While global standards like LEED are used, India-specific green building certifications like GRIHA (Green Rating for Integrated Habitat Assessment) are becoming more relevant in the warehousing sector.
- **Technology integration:** Green leases in Indian warehouses are increasingly incorporating smart building technologies for better energy management and environmental monitoring.
- **Sustainability considerations:** As sustainability factors become more important for investors, green leases in warehousing are likely to become more prevalent in India.

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Sustainability and environmental responsibility have become integral to our business strategy, both to meet regulatory expectations and to align with customer values. This has been a growing priority over the past few years as we have increasingly focused on reducing our carbon footprint, improving energy efficiency, and supporting broader ESG initiatives.

Rajesh Shetty - Mahindra Logistics Limited

- **Challenges in implementation:** Despite the benefits, the adoption of green leases faces challenges in India, including higher initial costs, lack of standardisation, and limited expertise in sustainable warehousing practices.
- **Enablers: Government incentives:** The Indian government is increasingly offering incentives for green building practices, which could accelerate the adoption of green leases in the warehousing sector.
- **Opportunity areas - focus on cold storage:** With the growth of India's cold chain logistics, there's a particular emphasis on making these energy-intensive facilities more sustainable through green lease provisions.



JLL Sustainability Services



Plan

Develop carbon baselines and actionable sustainability strategies that unlock value and outline a clear path to goals.

- Sustainability strategy
- Decarbonisation strategy
- Green lease strategy
- Science Based Targets Initiative (SBTi) advisory
- GRESB advisory
- Net Zero Carbon Modelling
- Code & LEED Energy Modelling



Act

Develop, prioritise and execute sustainability initiatives that drive direct progress on sustainability goals.

- Climate risk assessment
- Embodied carbon assessment
- Building decarbonisation retrofits
- Energy efficiency advisory
- Renewable energy advisory
- Acquisition sustainability due diligence
- Sustainability, wellness ratings and certification
- Asset-specific net-zero carbon roadmap
- Building Portfolio Modelling
- Daylighting Analysis



Manage

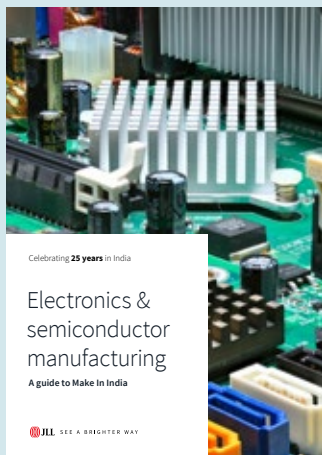
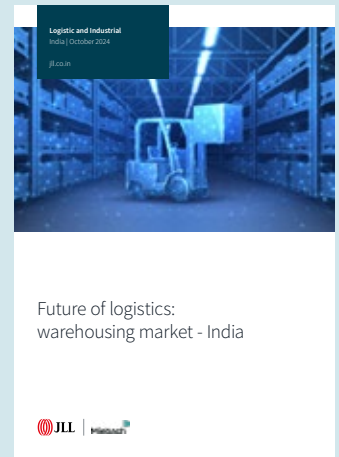
Optimise implemented projects and programs. Measure and monitor critical data to support continued progress and compliance reporting.

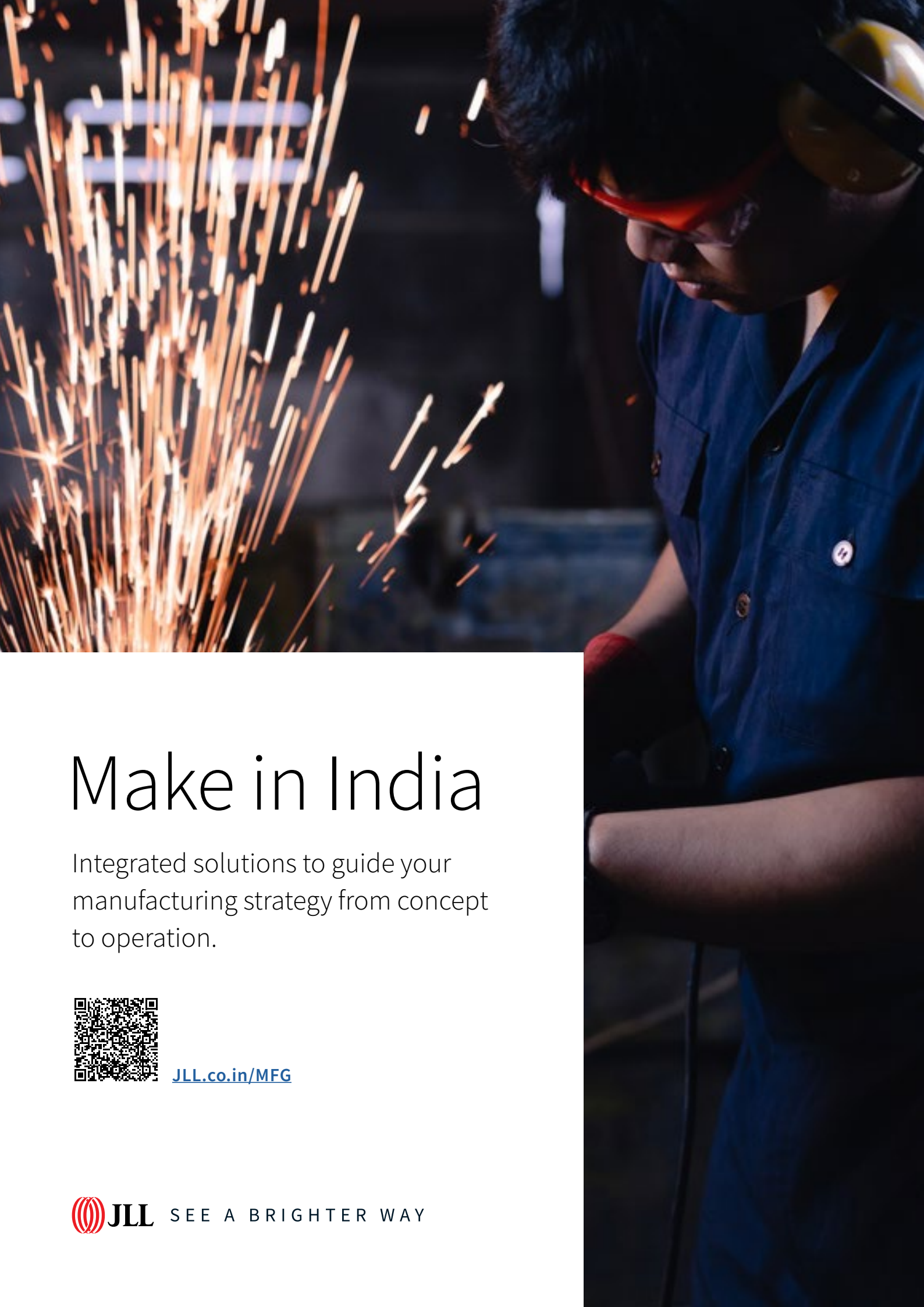
- Program management
- Data management + insights
- Portfolio wide sustainability program management and delivery
- Benchmarking and performance mapping
- Carbon disclosure reporting
- Life Cycle Analysis

As the Indian warehousing market continues to grow and mature, green leases are expected to play an increasingly important role in the sector's development, driven by a combination of economic benefits, regulatory pressures, and growing environmental awareness.



India Industrial & Logistics thought leadership compendium





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